

PM 23

100-665

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(Front Panel)

Pennant® 5G

Granular Herbicide

For weed control in nurseries and landscape plantings,

40 Pounds
Net Weight

10 Pounds
Net Weight

Active Ingredient:

Metolachlor: 2-chloro-N-(2-ethyl-6-methylphenyl)-
N-(2-methoxy-1-methylethyl) acetamide 5.0%

Inert Ingredients: 95.0%
Total 100.0%

Control No. 54790 (40 lbs.)

Pennant 5G is a granular herbicide

Keep Out of Reach of Children

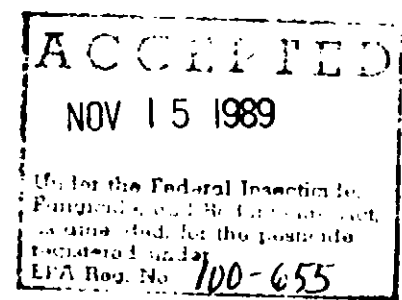
Caution

See additional precautionary statements on back of bag.

EPA Reg. No. 100-665
EPA Est. 32761-MO-3

See directions for use on back of bag

CIBA-GEIGY



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(Back Panel)

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product. If terms are not acceptable, return the unopened product container at once.

Conditions of Sale and Warranty

The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of CIBA-GEIGY or the Seller. All such risks shall be assumed by the Buyer.

CIBA-GEIGY warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above. CIBA-GEIGY makes no other express or implied warranty of fitness or Merchantability or any other express or implied warranty. In no case shall CIBA-GEIGY or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product. CIBA-GEIGY and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of CIBA-GEIGY.

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

No user shall permit the application of this product in such a manner as to directly or indirectly expose workers or other persons except those knowingly involved in the application. The area being treated must be vacated by unprotected persons.

Reentry Statement

Do not enter treated areas without protective clothing until sprays have dried.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings must be given which inform workers of areas or fields that may not be entered without specific protective clothing until sprays have dried, and appropriate actions to take as described under Precautionary Statements at the end of this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: "CAUTION. Area treated with Pennant Liquid on (date of application). Do not enter without appropriate protective clothing until sprays have dried. In case of accidental exposure, flush eyes or skin with plenty of water. Call a physician if irritation persists. Remove and wash contaminated clothing before reuse."

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, AND/OR ILLEGAL RESIDUES.

General Information

Pennant Liquid Herbicide, containing the active ingredient metolachlor, controls many annual grasses, certain broadleaf weeds, and yellow nutsedge in landscape plantings, container-, field-, or liner-grown ornamentals, conifers, nonbearing fruits, and nonbearing citrus in nurseries.

DO NOT USE IN GREENHOUSES OR OTHER ENCLOSED STRUCTURES.

NOTICE TO USER: Plant tolerances to Pennant 5G herbicide have been found to be acceptable in the specific genera and species listed on this label. Because of the large number of species and varieties of plants, it is impossible to test each for tolerance to Pennant 5G. Neither the manufacturer nor the seller has determined whether or not Pennant 5G can be used safely on plants not specified on this label. The professional user should determine if Pennant 5G can be used safely before using commercial. In a small area, test the recommended rates for a particular group of unlabeled plants for phytotoxicity before widespread use.

Nurseries and Landscape Plantings

Apply Pennant 5G using a rotary spreader or similar type applicator at rates indicated below for control of many annual grasses, certain broadleaf weeds and yellow nutsedge. Calibrate spreader before application according to the manufacturer's directions. Refer to chart below for suggested settings. Settings are only reference points for calibration. Due to variations in equipment, equipment age and condition, humidity, variations in walking speed, and other variables, these settings should not be used without first checking them through calibration.

Suggested Applicator Settings

Rate Per Acre	40 lbs.	60 lbs.	80 lbs.
Rate per 1,000 sq. ft.	.9 lb.	1.35 lbs.	1.8 lbs.
Ounces per 1,000 sq. ft.	14.5 oz.	21.75 oz.	29 oz.
Applicator Brand	Suggested Settings		
Scott R-7	--	--	B+5.5/10
Scott R-8	G+8.5/10	H+3.5/10	H+6.5/10
Lesco	A+7.5/10	--	C+1.5/10
Warren-T	2.8	3.3	3.8
Spyker & Cyclone	2.6	2.8	3.0

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Weeds Controlled

annual bluegrass	green foxtail	yellow foxtail
barnyardgrass	prairie cupgrass	<u>yellow nutsedge</u>
(watergrass)	red rice	black nightshade
crabgrass	signalgrass	carpetweed
crowfootgrass	(Brachiaria)	Florida pusley
fall panicum	southwestern cupgrass	galinsoga
foxtail millet	witchgrass	pigweed
giant foxtail		
goosegrass		

Weeds Partially Controlled*: common purslane, groundsel, hairy nightshade, sandbur, seedling johnsongrass, shattercane and volunteer sorghum.

*Control of these weeds can be erratic due partially to variable weather conditions.

Note: If you plan to use Pennant 5G to control weed species not listed on this label, check with your local weed specialist or test Pennant 5G on a small-scale basis before widespread use.

Application

Broadcast Pennant 5G at rates shown below. Apply before grass and broadleaf weeds or yellow nutsedge emerge, or after existing weeds or nutsedge plants have been removed. A second application may be needed to provide grass and yellow nutsedge control for an extended period. Do not make more than 2 applications per year.

<u>Suggested Rates of Pennant 5G</u>		
<u>Soil Texture</u>	<u>Lbs./A*</u>	<u>Lbs./1,000 sq. ft.</u>
Coarse	40-60	0.9 - 1.4
Medium	40-60	0.9 - 1.4
Fine	60-80	1.4 - 1.8

*Use higher rate for a given soil texture on high organic matter soils and where yellow nutsedge and/or a heavy infestation of weeds is expected. Use the lower rates on soils with low organic matter content, and where light infestations of grass weeds are expected. In peat and muck soils and soils highly enriched with organic matter (i.e., sawdust) and/or synthetic mixes, the activity of Pennant 5G may be reduced.

If band applications are used, calculate the amount of Pennant 5G needed as follows:

$$\frac{\text{Band width in inches}}{\text{Row Spacing in inches}} \times \frac{\text{Broadcast Rate}}{\text{Per Acre}} = \frac{\text{Band Rate}}{\text{Per Acre}}$$

Precautions: 1) To avoid plant injury, do not apply Pennant 5G on seedbeds, cutting beds, or unrooted cuttings before transplanting or to plants until the soil has firmly settled around roots. 2) Should Pennant granules adhere to the foliage, follow with sufficient overhead irrigation to wash Pennant from the foliage to reduce the chance of injury.

Pennant 5G has been found to be safe on the following plants:

Container-Grown Plants

- Abelia, Glossy (Abelia grandiflora)
- Aucuba (Aucuba spp.)
- Arborvitae, Globe (Thuja occidentalis 'Globosa')
- Azalea, Catawba (Rhododendron catawbiense)
- Azalea, Fashion (Rhododendron hybrida 'Fashion')
- Azalea, Formosa, Indian (Rhododendron indica)
- Azalea, Kurume (Rhododendron obtusum)
- Bald Cypress (Taxodium distichum)
- Birch, River (Betula nigra)
- Boxwood, English/American (Buxus sempervirens)
- Boxwood, Japanese (Buxus microphylla)
- Carex, Variegated (Carex spp.)
- Cedar, Red (Juniperus virginiana)
- Hemlock (Tsuga canadensis)
- Holly, Dwarf Burfordi (Ilex cornuta 'Burfordii Nana')
- Holly, Japanese (Ilex crenata)
- Holly, Savanna (Ilex attenuata 'Savannah')
- Hosta (Hosta lancifolia 'Albo Marginata')
- Ivy, English (Hedera helix)
- Juniper, Andorra (Juniper horizontalis)
- Juniper, Hick's (Juniperus sabina 'Foemina')
- Juniper, Pfizer (Juniperus cinensis 'pfitzeriana')
- Leucothoe (Leucothoe fontanesiana)
- Ligustrum (Ligustrum japonicum)
- Liriope, Green (Liriope spicata)
- Liriope, Monroe White (Liriope muscara 'Monroe White')
- Liriope, Variegated (Liriope muscara 'Variagata')
- Maple, Red (Acer rubrum)
- Mondo Grass (Ophiopogon japonicus)
- Oak, Willow (Quercus phellos)
- Pachysandra (Pachysandra terminalis)
- Pine, Virginiana (Pinus virginiana)
- Pittosporum (Pittosporum tobira)
- Rosebay (Rhododendron maximum)

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- Spicebush (Illicium anisatum)
- Spurwood (Oxydendrum aboreum)
- Wax Myrtle (Myrica cerifera)
- Yaupon, Dwarf (Ilex vomitoria 'Nana')
- Yew (Taxus cuspidata)
- Yucca (Yucca spp.)

Field- and Liner-Growr. Plants and Plants in Landscape Plantings*

*Plants transplanted normally in rows in a nursery or similar area for further growth before transplanting to final growing location (place of establishment).

- ✓ African Lily (Agapanthus africanus)
- ✓ Ajuga (Ajuga reptans)
- ✓**Apple (Pyrus malus), including Red Delicious, Golden Delicious
- ✓ Arborvitae (Thuja spp.), including Globe
- ✓ Aucuba (Aucuba spp.)
- ✓ Azalea (Rhododendron spp.), including Flame, Formosa, Hershey Red, Herbert, Purple Splendor
- ✓ Bald Cypress (Taxodium distichum)
- ✓ Bamboo, (Nandina domestica), including Heavenly
- ✓ Barberry (Berberis spp.), including Mentor, Warty, Wintergreen
- ✓ Bayberry (Myrica spp.)
- ✓ Birch, European Clump (Betula spp.)
- ✓ Boxwood (Buxus spp.)
- ✓ Camellia (Camellia spp.)
- ✓**Cherry (Prunus spp.), including Kwanson, Subhirtella Weeping, Schubert
- ✓ Cleyera (Ternstroemia gymanathera)
- ✓ Cotoneaster (Cotoneaster spp.), including Sargent, Vanguard
- ✓**Crabapple (Malus spp.), including Eleyi, Indian Magic, Perfusion, Radiant, Sargent, Snow Drift, Vanguard
- ✓ Crepe Myrtle (Lagerstroemia spp), including Byars White
- ✓ Dogwood (Cornus spp.) including Chinese, Red Stem, White
- ✓ Escallonia (Escallonia fradesii)
- ✓ Euonymus (Euonymus spp.), including Bigleaf Wintercreeper, Purpleleaf Wintercreeper, Winged
- ✓ Firethorn (Pyracantha spp.)
- ✓ Fir, Douglas (Pseudotsuga menziesii)
- ✓ Fir (Abies spp.) including Fraser, White
- ✓ Forsythia (Forsythia spp.), including Arnold's Dwarf, Golden Bells, Spring Glory
- ✓ Fortnight Lily (Morea spp.)
- ✓ Gingko (Gingko biloba), including Autumn Gold
- ✓ Green Ash (Fraxinus spp.)
- ✓ Hemlock (Tsuga spp.)
- ✓ Holly (Ilex spp.), including American, Boxleaf Japanese, Green Lustre Japanese, Dwarf Burfordi, Nellie R Stevens
- ✓ Honey Locust (Gleditsia triacanthos), including Shademaster

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- ✓ Honeysuckle (Lonicera spp.), including Emerald Mound
- ✓ Hosta (Hosta lancifolia), including Variegated
- ✓ Hybrid Tea Rose (Rosa spp.)
- ✓ Hydrangea (Hydrangea spp.), including Annabel
- ✓ Ice Plant (Mesembryanthemum crystallinum)
- ✓ Ivy, English (Hedera spp.)
- ✓ Japanese Andromeda (Pieris spp.)
- ✓ Japanese Red Maple (Acer spp.)
- ✓ Jasmine (Jasminum spp.), including Asian
- ✓ Juniper (Juniperus spp.), including Andorra, Bar Harbor, Blue Pacific, Blue Rug, Chinese, Creeping, Sea Green, Shore, Youngstown Andorra
- ✓ Kalmia (Kalmia latifolia)
- ✓ Leatherleaf Fern (Rumohra adiantiformis)
- ✓ Leucothoe (Leucothoe spp.)
- ✓ Ligustrum (Ligustrum japonicum)
- ✓ Lilac (Syringa spp.) including James McFarlane
- ✓ Liriope (Liriope spp.), including Monroe White, Silver, Sunproof
- ✓ Locust (Robinia spp.), including Shademaster, Sunburst
- ✓ Maple Whips (Acer spp.)
- ✓ Maple (Acer spp.), including Emerald Queen, Silver
- ✓ Miniature Rose (Rosa spp.) Variegated
- ✓ Mondo Grass (Ophiopogon japonicus)
- ✓ Mountain Laurel (Kalmia spp.)
- ✓ Ninebark (Physocarpus spp.), including Dwarf
- ✓ Oak (Quercus spp.), including Black, Red, White, Willow
- ✓ Osmanthus (Osmanthus spp.)
- ✓ Pachysandra (Pachysandra spp.)
- ✓ Pampas Grass (Cortaderia selloana)
- ✓ **Pear (Pyrus spp.), including Aristocrat, Bartlett, Bradford, Kieffer, Redspire Flowering
- ✓ Photinia (Photinia spp.)
- ✓ Pine (Pinus spp.), including Austrian, Black, Mugho, Scotch, White, Green, Virginia
- ✓ Pittosporum (Pittosporum spp.) including Variegatum, and Wheeleri
- ✓ **Plum (Prunus spp.), including Bruce, Methley, Newport Flowering, Purple, Santa Rosa, Thundercloud
- ✓ Podocarpus (Podocarpus spp.)
- ✓ Poplar (Populus spp.)
- ✓ Potentilla (Cinquefoil) (Potentilla spp.)
- ✓ Privet (Ligustrum spp.)
- ✓ Pyracantha (Pyracantha spp.)
- ✓ Red Cedar (Juniperus virginiana)
- ✓ Rhododendron (Rhododendron spp.)
- ✓ Rosebay (Rhododendron spp.)
- ✓ Russian Olive (Eleagnus angustifolia)
- ✓ Sand Cherry (Prunus spp.), including Purpleleaf
- ✓ Snowberry (Symphoricarpos spp.), including White
- ✓ Spicebush (Illicium spp.)
- ✓ Spirea (Spiraea spp.), including Froebelli and Vanhoutte
- ✓ Spruce (Picea spp.), including Black Hills, Blue Colorado

- Stone Crop (Sedum spp.)
- St. John's Wort (Hypericum spp.), including Kalm
- Sweet Broom (Cytisus racemosus)
- Sweetgum (Liquidambar spp.), including American
- ✓ Tulip Tree (Liriodendron tulipifera)
- ✓ Viburnum (Viburnum spp.), including Downy Arrowwood
- ✓ Wax Myrtle (Myrica spp.)
- ✓ Weigela (Weigela spp.)
- ✓ Willow (Salix spp.), including Corkscrew, Golden, Weeping
- ✓ Wisteria (Wisteria senensis)
- ✓ Yaupon, (Ilex spp.), including Dwarf
- ✓ Yew (Taxus spp.), including Dwarf, Hicks, Japanese

**Do not apply to trees that will bear harvestable fruit within 12 months, or illegal residues may result.

Pennant 5G may also be applied before or after applications of other herbicides registered for ornamentals (e.g., Goal®, Princep®, Ronstar®, Surflan®, etc.) to broaden the spectrum of control.

Storage and Disposal

Pesticide

Store in a dry place. Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Open dumping is prohibited. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container

Completely empty bag into application equipment. Dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke from burning bags.

For minor spills, follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372 day or night.

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling and wash contaminated clothing before reuse.

Statement of Practical Treatment

If in eyes: Flush with plenty of water. Call a physician if irritation persists.

If on skin: Wash with plenty of soap and water. Get medical attention.

If inhaled: Remove victim to fresh air.

Environmental Hazards

Cover or incorporate granules that are spilled during loading or are visible on soil surface in turn areas. Do not contaminate water when disposing of equipment wash waters.

Ground Water and Surface Water Advisory

Metolachlor has been identified in limited sampling of groundwater and there is the possibility that it may leach through the soil to ground water, especially where soils are coarse and ground water is near the surface. Following application and during rainfall events that cause runoff, metolachlor may reach surface water bodies including streams, rivers, and reservoirs.

Care must be taken when using this product to prevent spills or improper disposal of excess pesticide granules.